

HEATER

WATER, IMMERSION, GASOLINE OPERATED, TANK TRAILER

STOCK NO. 65-H-1711



WAR DEPARTMENT • AUGUST 1945

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TM 10-704, Heater, Water, Immersion, Gasoline Operated, Tank Trailer (Stock No. 65-H-1711), is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

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Refer to FM 21-6 for explanation of distribution formula.

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TM 10:704
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PART ONE

INTRODUCTION

Section I. DESCRIPTION AND DATA

I. DESCRIPTION.

a. The heater is designed to prevent water from freezing in the trailer, 1-ton, 2-wheel, water tank, 250-gallon. It may also be used with the truck, 2½-ton, 6 x 6, water tank, 700-gallon. It is designed to burn gasoline, but kerosene or fuel oils may be used in an emergency. The principal difficulties with heavy fuels are:

- (1) Difficulty in starting.
- (2) Smoke.
- (3) Necessity for frequent cleaning of the burner.

b. In construction and operation, the heater is similar to the heater, immersion type, for can, corrugated. (See TM 10-702.) The heater consists of a burner, a watertight combustion chamber, a tall smoke stack, and a fuel tank with a valve which allows the fuel to drip into the burner. The combustion chamber contains a baffle plate which acts as an obstruction, thus insuring a large heating surface area. The draft is produced by the use of an 8-foot stack connected with the combustion chamber. A torch, consisting of an asbestos rope pad fastened to the end of an iron rod, is used to start the draft and to light the heater.

2. TABULATED DATA.

Weight:	80 pounds
Cubage:	6 cubic feet
Fuel tank capacity:	2 gallons

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Section II. TOOLS, PARTS, AND ACCESSORIES

3. SPARE PARTS.

<i>Stock No.</i>	<i>Nomenclature</i>	<i>Quantity issued with heater</i>
43-B-23722	BOLT, stove, steel, NCTS, Flat head, without nut, Class 1 Fit, $\frac{3}{16}$ " x $\frac{3}{4}$ "	3
65-H-1240	BURNER, downdraft, $3\frac{1}{4}$ " dia., without fittings	1
65-H-1410	COVER, Hole, Heater, Water, Immersion, Tank Trailer	1
65-J-1847-30 ...	GATE, Draft, Heater, Immersion, Can, Corrugated	1
65-H-2008	LIFTER, Draft Gate, Heater, Water, Immersion, Tank Trailer	1
65-H-2015	LIGHTER, Burner, Heater, Water, Immersion, Tank Trailer	1
43-N-11398	NUT, Wing, Steel, Threaded, NCTS, $\frac{3}{16}$ " ..	3
43-N-11402	NUT, Wing, Steel, Threaded, NCTS, $\frac{5}{16}$ " ..	1
43-N-11404	NUT, Wing, Steel, Threaded, NCTS, $\frac{3}{8}$ " ..	2
65-H-2170	PIPE, Feeder, heater, water, immersion, tank trailer, with receiving bowl $26\frac{1}{8}$ "	1
65-N-2010	PIPE, stove, tent, joint or section, straight, 4" nested	4
65-J-2139-30 ...	PLUG, Filler, Heater, Immersion, Can, Corrugated	1
65-J-2510	TANK, Fuel, Heater, Immersion, Can, Corrugated	1
65-J-2676-30 ...	VALVE, Gasoline, Heater, Immersion, Can, Corrugated	1

PART TWO

OPERATING INSTRUCTIONS

Section III. OPERATION UNDER USUAL CONDITIONS

4. ASSEMBLING.

Place the heater in the tank and tighten hold-down wing nuts to keep the heater from floating. Erect four lengths of stack. (This much stack is necessary for satisfactory operation of the burner.) Before lighting fill the gasoline tank and clamp it in place firmly with the drip valve over the center of the small cast iron receiving bowl on the top end of the pipe which connects it to the burner.

5. OPERATION.

Warning: Keep face away from area immediately over burner compartment when lighting.

- a. Soak the lighter pad with gasoline and light it with a match.
- b. Lift the draft gate by means of the handle located between the stack and the burner opening. Insert lighted pad into the stack chamber through the draft gate. This operation warms the stack and creates a draft.
- c. After a minute or two withdraw the lighter from the stack chamber and close the draft gate.
- d. Hold the lighter at the burner and open air vent on fuel can and open drip valve slightly.
- e. After lighting burner, leave lighter at burner until all gas burns off lighter.
- f. Adjust the flow from the drip feed valve to a fast drip but avoid a solid stream of gasoline. There may be some smoke for the first few minutes, but thereafter smoke indicates incomplete combustion and a waste of fuel. In normal use, about one-third of a gallon an hour is consumed.
- g. The hood should be kept closed at all times except when lighting or adjusting the burner.
- h. To put out the fire, shut off the fuel valve.

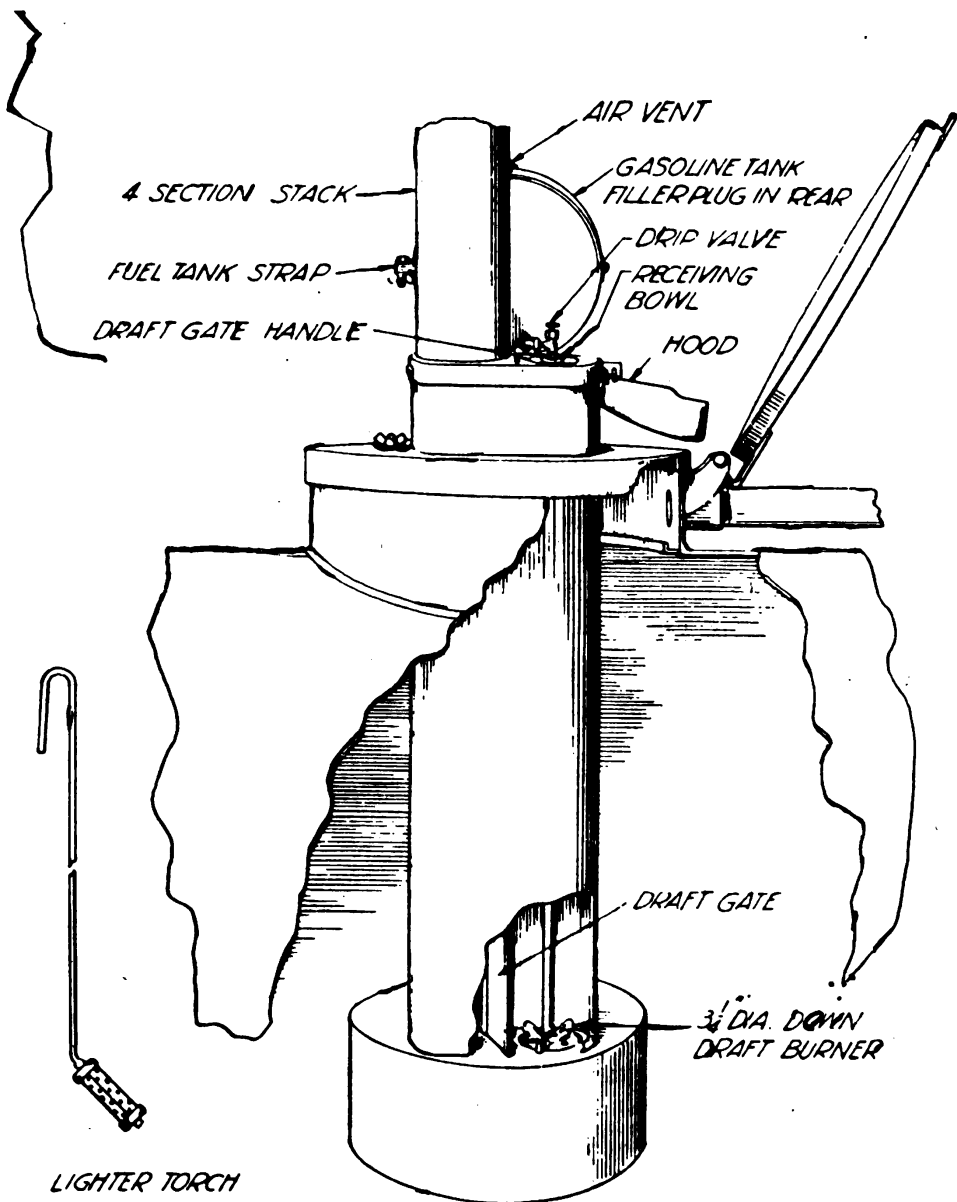


Figure 1. Heater installed in tank.

Section IV. DESTRUCTION TO PREVENT ENEMY USE

6. DESTRUCTION.
 - a. Remove and destroy fuel valve.
 - b. Remove and destroy burner.
 - c. Cut body of heater to allow water to fill burner chamber.

PART THREE

MAINTENANCE INSTRUCTIONS

Section V. PREVENTIVE MAINTENANCE

7. GENERAL.

The heater is sturdy and easy to operate. With reasonable care and maintenance, it should give excellent results.

8. CLEANING.

The primary maintenance function is to keep the burner clean. Take burner apart by removing three screws. Clean thoroughly between the burner top plate and the vaporizer, and reassemble. This operation is usually necessary about once a week. The burner surfaces should be cleaned with a wire brush. If a wire brush is not available, clean the burner surfaces by rotating them on dry earth. If kerosene or fuel oils are used, more frequent cleaning will be necessary.

PART FOUR

AUXILIARY EQUIPMENT

(Does not apply)

PART FIVE

REPAIR INSTRUCTIONS
(Does not apply)
